Concept Proposal

Enhancing the maintenance management process Internet Data Centers using eMaintenance

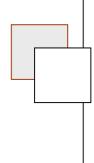
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Executive Summary

1. The proposal for e-Maintenance

Electronic Maintenance (eMaintenance) is a maintenance management concept whereby maintenance tasks are managed electronically using real-time data obtained over the Internet.

iSCADA is a web-based SCADA solution that offers a cost-effective and efficient means to implement eMaintenance. It enables you to remotely **monitor** and **manage** te maintenance of critical data center facilities line backup generators, UPS, precision air conditioners and HSSD fire suppression systems.

eMaintenance offers an unprecedented level of transparency, efficiency and availability. It compliments and supervises over your conventional maintenance processes that rely on period manual inspections and tests.

2. Benefits of eMaintenance using iSCADA

2.1 High System Availability

All critical system parameters are monitored 24x7. In the event of any alarms or failures, maintenance personnel are alerted by SMS and email immediately. Prompt actions in restoring system abnormalities and failures will prevent escalation of outages and ensure minimal downtime.

2.2 Enhanced Transparency in Maintenance Management

Every event is recorded in a central server, leaving behind and audit trail giving management at all levels direct access to maintenance data. Useful statistics and Key Performance Indicators (KPIs) like *Availability Index* and *Downtime* of every subsystem are available online to any authorized user within your organization.

2.3 Improved Maintenance Efficiency

With a 24x7 monitoring system in place, routine physical inspections can be reduced to a minimum, drastically improving the efficiency of the entire maintenance management.

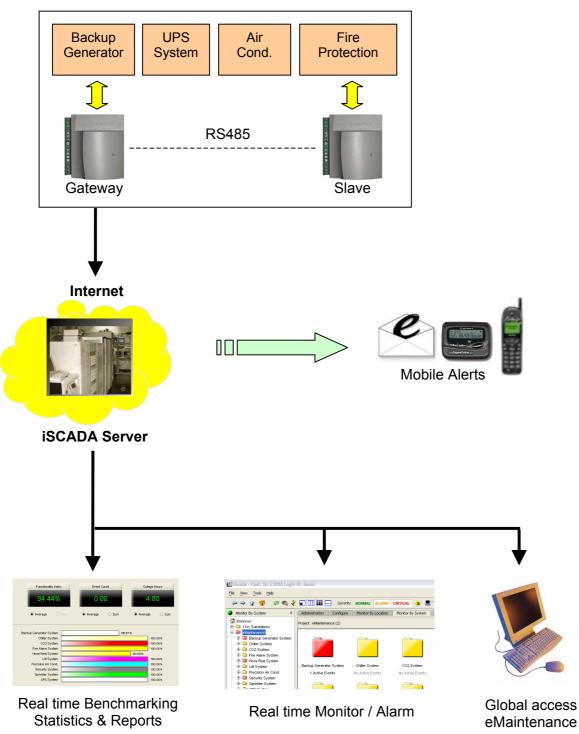
2.4. Fast Deployment and Highly Scalable

Delivered through on a managed services model, we can bring data to your desktop in days instead of weeks or months. Scale upwards effortlessly from one system at one site to multiple systems across thousands of sites.

iSCADA System Architecture

Critical parameters from your equipment are detected by an embedded internet Gateway retrofitted to your equipment, and automatically transmitted over the Internet to the iSCADA Server. The Gateway connects to the Internet via your local ISP. All information is logged and processed at the Server and made available to any authorized user from any Internet connection.

The server may be configured to send out mobile alerts via SMS, pager and email.



Data Center infrastructure from all sites

